Seattle City Light

Summer 2008
www.seattle.gov/light/

The Power Daily

The flip side of challenge? Opportunity

Go to the gas station, visit a market, and you know that these are fairly tough times. That's true for individuals, and true for industries. City Light, as well as other utilities, are seeing higher energy costs, more competition for fewer resources, plus the strain of both an aging infrastructure and many employees approaching retirement.

To prosper in an uncertain future, Seattle City Light has created a strategic plan that outlines where the utility needs to go and how it will get there — with the goal of continuing to provide customers the affordable, reliable electric service they expect.

What makes the plan work is an approach that turns challenges into opportunities.

The electrical industry must adapt to a new world of energy resources and energy delivery.

Off to see the wizard

Without a doubt, City Light faces challenges on several fronts, including increased demand for electric service. As the utility makes plans to meet that need, the question becomes, how to do that?

Solutions will come from City Light's ability to quickly and intelligently adapt to a new world, a new way of doing business. Like Dorothy on the road to Oz, the entire industry has come to understand this isn't Kansas anymore. Utilities that prosper will do something about that.

One way City Light will be able to move ahead is by making sure it has the resources needed in the years to come. The utility is seeking new, renewable energy sources. It's working to secure long-term contracts with Bonneville Power Administration, which currently provides 40 percent of City Light's power. In addition, City Light's efforts to renew Boundary Dam's license ends in 2011, concluding five years of intensive work to meet federal requirements and ensuring continued generation from that essential facility.

Creating a new power plant

Meeting demand necessarily involves more conservation programs for both commercial and residential customers. In fact, conservation is considered City Light's "resource of first choice" because it does double duty — saving energy while avoiding the cost of building new generation plants. Conservation plans are equal to one new power plant going online.

Another major challenge for the utility is the certainty of new climate-change regulations. Proposed federal legislation to reduce and cap carbon emissions could well be the biggest policy change facing the energy sector, affecting every aspect of the industry. And there's no question that regional regulation is at our doorstep. Washington state has joined with other western states and Canadian provinces to develop greenhouse-gas trading policies by late 2008.

You have to have the tools

Having enough resources is part of the job. Delivery is another. Improvements to the transmission and distribution infrastructure must be made. That will require investment in the utility's physical assets as well as the vision to embrace a new generation of "smart" technology. The importance of this effort can't be overstated because it will literally move the utility from the 19th century into the 21st and will transform customer service.

Estimates are that during the next ten years, a 73 percent increase in upgrades and infrastructure improvements are required. Delayed or deferred maintenance has taken its toll on aging equipment and the utility can't afford to "run to failure." Reliability and service excellence are too important.

In an increasingly expensive industry, the utility must be financially agile. City Light intends to continue policies that will contain debt and maintain healthy cash reserves. Part of that means keeping rates stable while making sure customer rates reflect the real costs of providing power. When deciding on budget requirements, the utility will take the long view rather than settling for short-term fixes.

No time to waste

Perhaps the biggest challenge of all is to make progress while having minimum impact on the environment. The utility has been very successful at that: City Light achieved net-zero greenhouse-gas emissions in 2005, the first utility in the nation to do so, and repeated the accomplishment in 2006 and 2007. Downstream from the Skagit Hydroelectric Project, fish and wildlife flourish. These and other accomplishments are commendable but we can't sit still. City Light must continue to find ways of producing electricity responsibly.

Seattle City Light's Strategic Plan

In light of the many challenges and opportunities Seattle City Light faces, the utility has conducted a review of its current position, direction and resources. This effort has resulted in a detailed strategic plan that will guide the utility's efforts and expenditures in the near future. The plan has five priorities:

- To protect and enhance the environment through City Light's choices in power supply, conservation efforts, daily operations, and environmental programs;
- To strengthen and improve City Light's energy-delivery infrastructure so that it is current with changes in technology and customer demands;
- To develop power portfolio resources that efficiently meets the needs of our customers while complying with public-policy requirements.
- To ensure the utility's financial resilience, protecting customers against the volatility of City Light's hydro-dependent operations as well as exposure to power market risks;
- To build on City Light's existing strengths and become a high-performance organization that delivers superior customer service.

While it's true that pressures on City Light are mounting, it's also clear that nothing is insurmountable. **This newspaper tells that story.**

If you're not at the table, you're on the menu

In the spring of 2008, Mayor Greg Nickels and Seattle City Light Superintendent Jorge Carrasco hosted 70 representatives of City Light's key customers. It was the first of several important dialogues to become better informed on what federal and regional climate policies will mean to Seattle and City Light customers.

Addressing the gathering, Carrasco quoted Michigan Congressman John Dingell who, as a key house leader on climate change policies, has famously noted that "if you're not at the table, you're on the menu." Dingle warns that new laws governing greenhouse-gas emissions — most likely "cap and trade" programs — will change the way everyone does business, and soon.

After years of inaction, there are now serious efforts underway to tackle greenhouse-gas emissions. Federal legislation is being considered, and by late fall, western states and Canadian provinces will likely establish new rules on climate change through the Western Climate Initiative. By 2009, the effects of these policies could be felt. (*continued on page 4)*

Just the facts

Created by the citizens of Seattle in 1902, Seattle City Light has served its customers with electricity and related services for more than a century. It's the 9th largest municipally owned utility in the nation in terms of customers served. City Light is governed by Seattle officials, guided by public involvement and supported by customer revenues, not taxes.

Seattle City Light's:

Vision — To set the standard. To deliver the best customer service experience of any utility in the nation.

Mission — Seattle City Light is dedicated to exceeding customer expectations in producing and delivering environmentally responsible, safe, low cost and reliable power

Values — Excellence, accountability and stewardship.

Contacts

Outage Hotline
206.684.7400

Customer Service Call Center
206.684.3000
Out of area calls:
800.862.1181
(Interpreters are available.)

TTY/Hearing Impaired
206.233.7241

Electrical Service and Streetlight Service
North of Denny Way:
206.615.0600
South of Denny Way:
206.386.4200

Streetlight Problems
206.684.7056

Conservation Information (Residential and Commercial)
206.684.3800

After-Hours Electrical Emergency Line
206.706.0051

Vegetation Management/ Powerline Clearance
206.386.1663

Annual Report Information
206.684.3832

Skagit Tours
206.684.3030
www.SkagitTours.com

Communications and Public Affairs
206.684.3090

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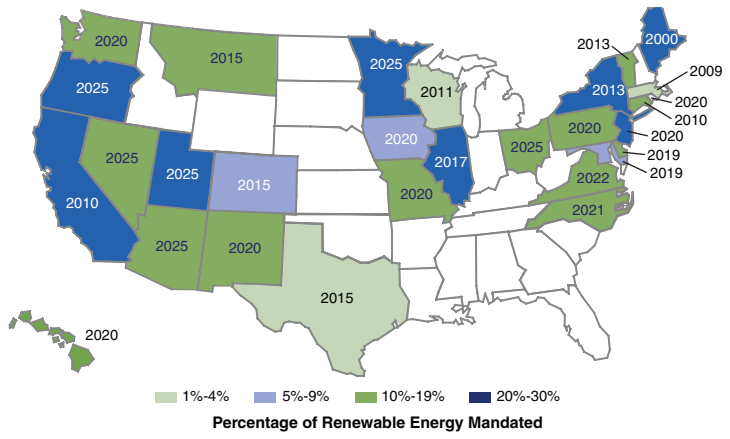
North Service Center
1300 N. 97th Street
Seattle WA 98103

South Service Center
3613 4th Ave South
Seattle WA 98134

The future of power

You hear about it a lot these days — something called "renewable energy" and how it's all the rage. In fact, renewable energy is a very good thing because it naturally replenishes itself. Perhaps the most well known renewables are solar and wind power. Increasingly popular renewable energy sources include geothermal, using the heat of the Earth. Some are also looking at the sea, which may literally be the wave of the future, harnessing tidal power.

State standards create a "land rush" for renewable energy resources
This chart shows years in which individual states must include a specific percentage of renewables in their portfolios.



As the demand for energy increases, City Light must deliver reliable energy to customers at a reasonable cost. The goal is to meet this new demand through conservation and new renewable energy alternatives. Just one of the challenges to this very large task is to identify these resources at a time when other utilities want the same thing.

It's the law

The scramble for renewables intensified when a Washington state legislative initiative was approved by voters. Called I-937, its requirements fast approach, beginning in 2012. Statewide, utilities with 25,000 customers or more must get 15 percent of their electricity from new, renewable resources by 2020.

It's a daunting job that the utility has not left to chance. Among City Light's efforts to solve the resources problem is the creation of an Integrated Resource Plan (IRP). A multi-disciplinary team began complex and meticulous work on the IRP in 2004. Completed in 2006, it offers a 20-year plan, with reviews conducted every two years. Currently, City Light is working on its 2008 IRP. The IRP is essential to the utility, particularly in light of I-937, and will ensure that City Light can identify resources for customers.

The greener, the better

Working with Seattle's Climate Action Now initiative, City Light is continually looking for new ways to support "green" alternatives. One of those programs is Green Up, the utility's voluntary green-power program for residential and business customers.

By enrolling in Green Up, customers buy green power for a portion of their electricity use, paying a bit more to cover the slightly higher cost of producing and integrating renewable energy into the northwest grid. These funds are used to acquire renewable energy credits (RECs) equal to the amount of customer demand. Participants who join Green Up are showing in a concrete way that they support renewable energy, which reduces reliance on fossil fuels and contributes to a cleaner environment.

Power with environmental protection

Over the years, City Light has learned many lessons on how to operate hydroelectric dams to generate necessary power while doing its utmost to protect the environment. The utility continues its leadership in balancing the two, focusing on habitat restoration and protection, as well as flow control to protect spawning salmon.

Working in partnership with various interest groups and users of the Skagit River, City Light has contributed to one of the largest returns of Puget Sound chinook salmon, along with other threatened and/or endangered species. Noteworthy milestones and awards include:

- 2004-2007: SCL protected 1,530 acres of key spawning and rearing habitat for chinook, steelhead, and bull trout in the Skagit and Tolt watersheds.
- The return of 20,000 chinook in 2004 was a landmark event — the largest return in 25 years but it also reached the Endangered Species Act recovery goal (17,000-35,000). In 2006 marked the third year in a row that returns topped 20,000.
- National Hydro Association 2008 Outstanding Stewards of America's Waters (OSAW) Award in the category of Recreational, Environmental and Historical Enhancement.
- Outstanding Partnership Award from the Skagit Land Trust, 2006.

Most recently, in June 2008, there was a special commemoration of the Boulder Creek acquisition — the utility's largest land purchase in 15 years — protecting 200 acres of old-growth forest, a part of 1,080 acres purchased. This protects important migration, spawning, and rearing habitat for chinook salmon, steelhead, and bull trout, as well as foraging and roosting habitat for bald eagles, northern spotted owl and marbled murrelets. The $1 million acquisition was made possible through a partnership with The Nature Conservancy, the Washington Department of Natural Resources and the U.S. Fish and Wildlife Service, an inter-agency effort to buy valuable land along Boulder Creek in the Skagit River watershed.

Photo: Al Solonsky

The Skagit is the only river in Washington to support all five species of salmon, plus steelhead and bull trout.

This belief that generating power should not come at the expense of the natural world is fundamental to the utility, as seen in its mission statement: *Seattle City Light is dedicated to exceeding customer expectations in producing and delivering environmentally responsible, safe, low cost and reliable power.*

City Light's 21st century workforce

The numbers are staggering. Within five years, more than half of City Light's employees will be eligible for retirement. The utility is hardly alone in that challenge. Most industries feel the strain of being on the downside of the baby boom curve. Fortunately, City Light has reinvigorated efforts to support and train current employees as well as seek out additional skilled workers.

Job one: recruit and retain

In recent years, the utility has hired and expanded its recruiting staff. Once candidates are identified, the utility is getting them on the job more quickly. Human Resources has vastly streamlined the hiring process. In 2007, those efforts resulted in 202 new hires and 181 promotions — including a doubling of journey-level lineworker hires in one year, an impressive achievement in a very tight labor market.

A City Council-approved amended budget for 2008 means City Light can fill an additional 104 positions.

The momentum grows. By the end of 2007, City Light achieved and maintained less than a five percent vacancy rate, down from 14 percent. Even so, attracting and keeping employees in a highly competitive field is going to require *(continued on page 4)*

Conservation: a new power plant

Back in 1977, when disco was big and bellbottoms bigger, Seattle City Light made a visionary decision. In partnership with the Bonneville Power Administration (BPA), the utility launched a series of conservation programs that — 30 years later — has made City Light a national leader in conservation. There's an oft-quoted philosophy heard around the utility, which states that "conservation is City Light's resource of first choice to meet energy load growth."

City Light's 30 years of conservation programs and customer partnerships have saved enough electricity to power the homes of two cities the size of Seattle.

That makes a world of sense. Conservation not only saves energy, it also means that City Light does not have to carry the cost of building new generation facilities. This philosophy has paid off: City Light's conservation programs and customer partnerships have saved enough electricity to power the homes of two cities the size of Seattle.

In 2007 alone, Seattle City Light exceeded its energy savings goal of 7.25 aMW (average megawatt hours) by 104 percent, a total savings of 7.57 aMW. What does that mean? Big savings: That kept 45,000 tons of carbon dioxide emissions out of the atmosphere, equivalent to taking 10,000 automobiles off Seattle streets.

The average fridge contains one pound of coolant, equal to 2.3 tons of carbon dioxide.

That was then, this is now

City Light has an exceptional conservation record, and it's building on that foundation. Recently, with a new director at the conservation helm, City Light's programs underwent a comprehensive analysis resulting in a new five-year plan for 2008-2012. Part of that effort makes sure all customer conservation resources are identified and captured in cost-effective methods.

This is a nimble plan, able to adapt to changing conditions and energy needs, incorporating the conservation industry's best practices. It's City Light's blueprint, which the utility uses to meet most of its load growth through conservation measures. Among the goals:

- unleash the power of conservation's potential;
- and continue City Light's 30-year commitment to energy conservation.

Off to a twisted start

City Light's Conservation Division launched its new conservation plan with specific budget, staffing and program improvements. Some of these changes are behind the scenes, but not all: Residential customers are already seeing benefits with the "Twist and Save" promotion for compact fluorescent light bulbs, a part of Climate Action Now.

Twist & Save offers deep discounts on the price of the bulbs, and kicked off in September 2007 at a Seattle Mariners baseball game with give-aways to fans of 5,000 CFLs. Through the end of 2007, a phenomenal 516,000 CFLs were purchased by City Light customers. By mid-June 2008, one million Twist & Save bulbs had been sold since the beginning of the program, representing major energy savings.

Most bang for the buck

Beyond bulbs, City Light also offers residential customers incentives to save energy through efficient windows and lighting. A recent promotion offers customers $30 to recycle their old inefficient refrigerators they may be using in a garage or basement. Not only that, but the fridge or freezer will be picked up and recycled in an environmentally responsible manner.

Not surprisingly, the largest conservation impact comes from improvements made in the commercial sector. Seattle City Light's Energy Smart Services reach out to those customers, offering cash incentives for conservation overhauls such as the installation of energy-efficient lighting, HVAC and other qualifying measures. Savings for 2006 and 2007 (averaged) were $5.9 million, and 36 million kilowatt-hours (kWh). By mid-June 2008, City Light's savings came to $2.4 million and 13.7 million kWh, with the expectation of saving about 40 million kWh by the end of the year.

Conservation no longer a luxury

In 1977, when City Light decided to rely on conservation as its resource of first choice, the demands for energy were not as intense as they are now. That demand will only continue to grow and in the face of that challenge, conservation has become an absolute necessity. With 30 years of conservation experience, and a new plan and guidelines, City Light will continue to lead the way into a cleaner, more efficient future.

How to recycle your CFLs

Compact fluorescent light bulbs (CFLs) use one-quarter the energy of conventional bulbs and last 10 times longer. However, CFLs contain a small amount of mercury and are not allowed in garbage and landfills.

But now there are three easy ways to recycle them:
All Home Depot stores now accept your burned-out CFLs at no charge. Visit www.takeitbacknetwork.org for a list of stores that will recycle them for a small fee. City Light now accepts burned-out CFLs (no tubes) at their North and South Service Centers:

South Service Center
3613 4th Ave. S.
(4th & Spokane)
Hours: 8 a.m. to 5 p.m. Mon–Fri

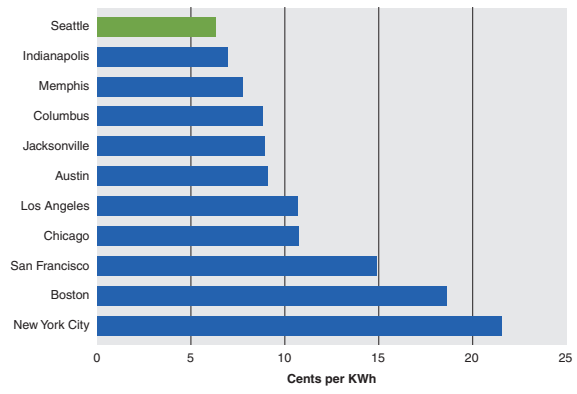
North Service Center
1300 N. 97th St.
(97th & Stone Way).
Hours: 8 a.m. to 5 p.m. Mon–Fri

For information on where to buy discounted CFLs, check out City Light's **Twist & Save program at www.seattle.gov/twistandsave.** For conservation information at City Light, call our Conservation Help Line at 206-684-3800 or visit www.seattle.gov/light/conserve.

What you can do to cut energy costs

City Light works in partnership with its customers to conserve energy. Here are excerpts from the utility's frequently asked questions, or FAQ, on saving electricity. Read the entire document online at **http://www.seattle.gov/light/conserve/resident/cv5_faq.htm.**

2007 average residential rates per kWh by city



What is the easiest thing I can do to lower my electric bill?

For an average Seattle family, the top two users of electricity are electric (home heating) and water heating. Reducing the electricity used in these two areas can make the biggest difference on your bill.

If you heat with electricity (with electric furnace, wall fans, baseboards or portable heaters), we recommend setting your thermostat to 68 degrees when you are home and 55 degrees when away or asleep. Setbacks of just one degree can save about three percent of your heating bill. For water heating, we recommend setting the tank to 120 or 130 degrees. Note: 120 degrees is the preferred setting for safety and economy but if you use an automatic dishwasher that does not have a hot water temperature booster, you will need to set your tank at 130 degrees in order to get proper cleaning.

For more detailed information, you may download a free booklet entitled "Do-It-Yourself Home Energy Audit: A Step-by-Step Guide for Identifying and Improving Your Home's Energy Efficiency."

What appliances in my home use the most electricity?

Electric furnaces and water heaters. Energy use is determined by the amount of power used (measured in watts or kilowatts) and the amount of time (hours) the appliance operates. Appliances that use lots of power are usually those that produce heat, such as electric furnaces, water heaters, stoves, ovens, irons, toasters and hair dryers. Appliances that operate for long periods of time include furnaces, water heaters, refrigerators, freezers and pool pumps and some light fixtures. Since electric furnaces and water heaters use a lot of power and operate long periods of time, these two appliances use the most electricity. For a more complete list of appliances and their average electric use, click here, or you may download a brochure entitled "Your Electric Appliances."

Does it save energy to turn down my thermostat when I am asleep or when I am not at home?

You will save energy by turning down your thermostat at any time. Turning it down to 55 degrees or off when you sleep and when you are away from home makes the most sense because you will experience little discomfort as a result. If you really want economy with comfort, install a new electronic, automatic setback thermostat for *(continued on page 4)*

If you're not at the table

(continued from page 1)

The carbon-constrained future

Cap and trade scenarios are what experts call our carbon-constrained future. City Light must work with its largest commercial customers to understand the impact of these curbs because the majority of the utility's conservation savings come from the commercial sector. Much has already been accomplished:

- In 2006, commercial load was reduced by 11 percent;
- Seattle City Light spends $20 million a year on commercial conservation, more per customer than any single state in the nation;
- Since 1990, the utility avoided 5 million tons of CO_2 through conservation and saved customers $63 billion.

The challenges ahead are steep and getting steeper. Recently, Mayor Nickels announced that his U.S. Mayors' Climate Protection Agreement now has more than 800 cities signed on. That represents 85 million citizens, all pledging to carbon-emission reductions below 1990 levels by 2012. Those impressive goals will be accomplished under new rules that are only now emerging but are sure to create dramatic changes in the way City Light does business.

21st century workforce

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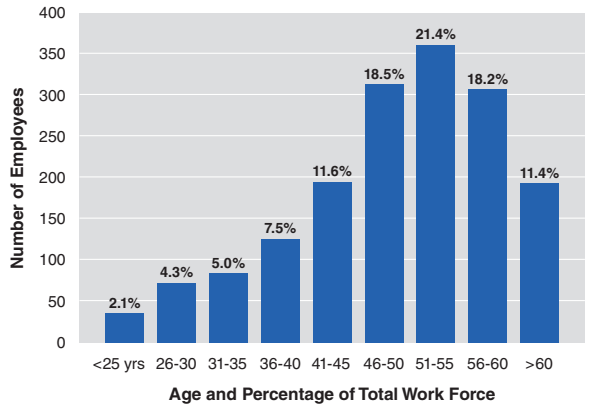
constant vigilance. City Light will continue to recruit, train and retain, with an emphasis on promoting and training from within.

Age distribution of Seattle City Light employees

Total number of employees: 1688 in 2007



The average age of utility workers in the U.S. is 44. The average age of City Light employees is 49.

By 2010, 40 to 60 percent of today's experienced utility works will retire.

The economy overall is experiencing a shortage of technical and skilled trades.

What you can do

(continued from page 3)

your furnace. These thermostats are available in home centers and hardware stores. They allow you to reheat your house in anticipation of your return home.

What is the difference between compact fluorescent lights (CFL) and incandescent (standard) light bulbs?

A compact fluorescent bulb lasts up to 10 times longer and uses 75% less energy than an incandescent bulb, while giving off the same amount and quality of light. It does this by using fluorescent technology in a completely new way: by folding up the tubes, improving the light quality, starting flicker-free and attaching the whole works onto a regular screw-base so that fluorescent bulbs can fit where your standard bulbs are now. Visit City Light's Efficient Lighting Web site for information on energy efficient lighting, including CFLs.

What is net metering?

Some customers generate a portion of their own energy, often with solar technology. Net metering refers to any customer generation-system which includes a meter that reads the "net" difference between the customer's electricity generation and consumption. (Most utility revenue meters are already able to spin in both directions according to whether power is being consumed or generated.) The net-metering customer pays only the net amount of electricity that they consume for any billing period. Any excess electricity generated by the customer during a billing period is credited on the customer's next bill. To participate in net metering, City Light requires that customers install generating systems in compliance with the utility's interconnection standards and sign an interconnection agreement in order to interconnect solar electric systems or other approved customer-owned generation.

What kind of electric heat is the most efficient?

All electric heaters except heat pumps are 100 percent efficient in converting electricity to heat. Heat pumps have an efficiency of 200 percent or more. However, different kinds of electric heaters are less effective in making the heat they produce go to where it's wanted. Baseboard heaters are arguably the worst at distributing their heat, and floor type radiant systems are probably the best. For more information you may download a brochure entitled "Purchasing a Heat Pump."

Does it take more energy to heat up my cold house in the morning, or keep the temperature constant all day and night?

With today's modern heating equipment and building practices, a home in Seattle will rarely get colder than 55 degrees overnight, even in the dead of winter. Using a correctly sized heater, a room takes only about 20 minutes to heat from 55 to 68 degrees. Compare this to having the heat on all night, and the savings are substantial. If there is a room you want warm when you wake up or arrive back home, consider installing an automatic setback thermostat in that room.

City Light helps test electric cars: In late May 2008, Mayor Greg Nickels introduced Seattle to a plug-in hybrid electric car (PHEV), one of several the City will use to test performance. City Light has access to three of the cars, which, in theory, can get 100 miles per gallon.